Compuprint 4247 Serial Matrix Printers

Remote Printer Management Utility for Serial Matrix Printers

MAN10300-00.00

First edition (October 2011)

This edition applies to the Compuprint 4247 printers and to all subsequent releases and modifications until otherwise indicated in new edition.

Internet

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The Remote Printer Management Utility

The Remote Printer Management Utility (RPMU) is a software tool for network administrators that allows the configuration and control of printers remotely connected to the Ethernet LAN. The following descriptions are valid only for RPMU Version 2.1. Later versions of the RPMU software may be available. Please check our website.

With this tool the installed printers may be controlled, configured and organized easily.

The main features are:

Device Discovery	Searches for the devices within a range of IP addresses.
Printer Organization	The printers connected to the network can be organized into logical groups in a hierarchically structured tree.
Printer Status Report	Checks the printer's status and reports alarms.
Printer Configuration	The remotely connected printers may be configured as needed from the administrator's workstation.
Firmware Updating	Provides a firmware downloading function to upgrade both the base and the LAN card firmware.
Remote Operator Panel Management	Provides a virtual operator panel for the remotely connected printer at the administrator's workstation that allows to perform all functions normally achieved pressing the operator panel keys.

The RPMU also provides the basic status management for third-party printers compliant to the standard MIB objects.

Operating System Compatibility

The RPMU is a Java based application and can be run on any platform supporting the Java Run Time Environment version 1.6 or newer.

Software Installation and Documentation

The Remote Printer Management Utility software can be downloaded from our web site.

- Remote Printer Management Utility installation files
- Auto Installation for Microsoft environment
- Installation shell script for Unix and Linux environments
- User Guide in PDF format
- Software license agreement

Installing the RPMU in the Windows environment

1. Download the RPMU software from our website.
2. Run the SETUP.exe file to install the java SDK and follow the instructions.
3. Run RPMU (executable Jar file) from the shortcut on desktop. The RPMU displays the Login window.

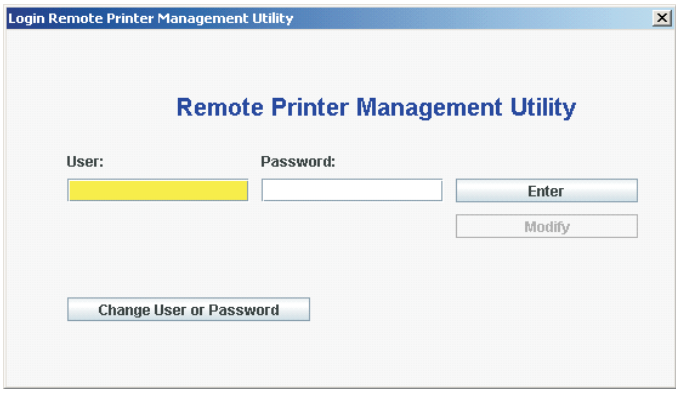


Figure 1. The RPMU Login Window

4. The Default User is “admin”; the Default Password is “admin”; and after the login and password entry the main window appears:

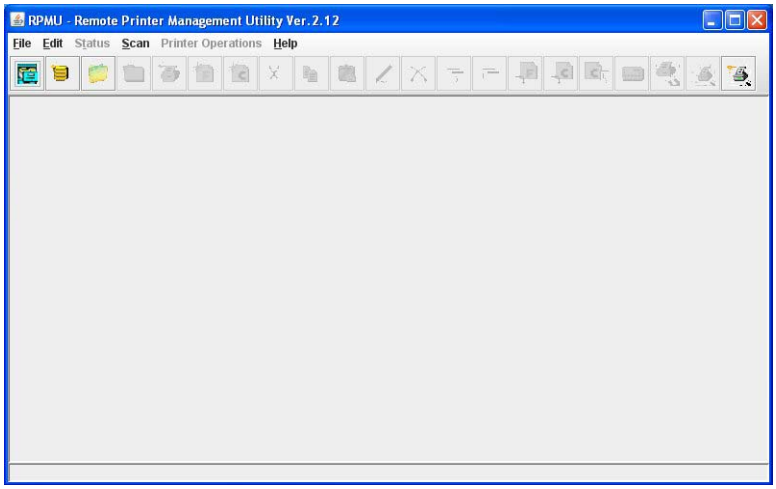


Figure 2. The RPMU Main Window

Important: If the password is entered incorrectly the first time, RPMU must be closed and restarted. RPMU will continually display the "Login Error" dialog box even if the correct information is entered without restarting.

How to change your Password

To change your Password select “Change User or Password” in the Login Dialog.

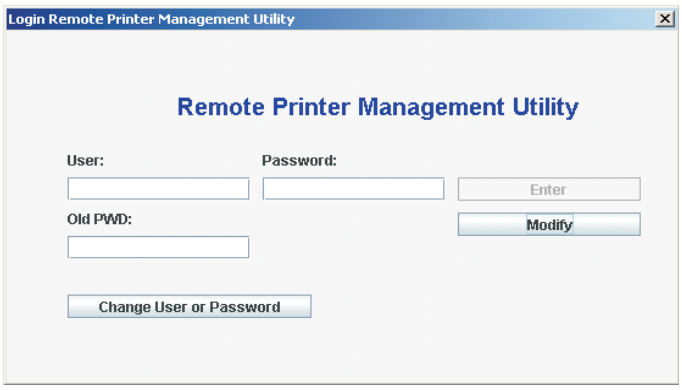


Figure 3. The Login Dialog

Enter the new **User** or new **Password** and **Old PWD** in the appropriate text boxes. Select the **Modify** button.

The RPMU Main Window

The RPMU Main Window, Figure 4, is divided into three main parts:

Menu Bar — Contains the four menus (**File**, **Edit**, **Status**, **Scan**, **Printer Operation** and **Help**) used to control the functions of the program.

Tool Bar — Contains the icons of the shortcuts for the most commonly used menu functions.

Printer Database Window — Displays an organized list of printers, configuration files, and firmware download files.

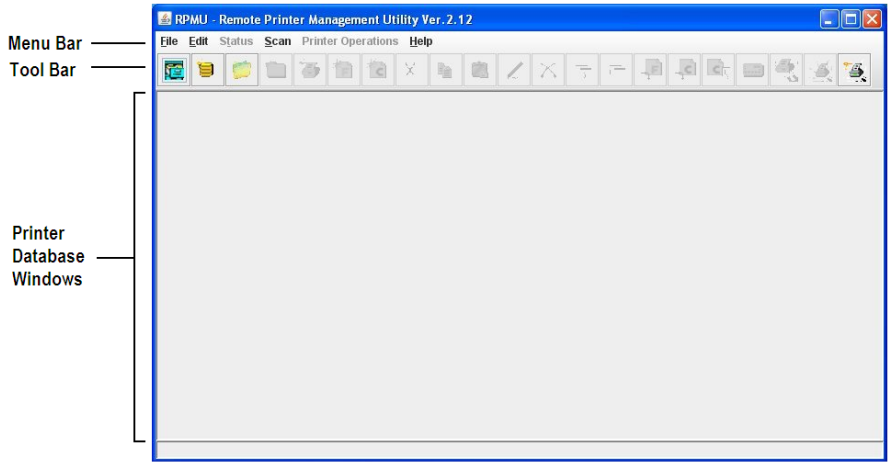


Figure 4. RPMU Main Window

The Menu Bar

The RPMU menu bar is located at the top of the main window and provides the following items:

- File Menu
- Edit Menu
- Status Menu
- Scan Menu
- Printer Operations Menu
- Help Menu

The File Menu

The **File** menu offers the main file management functions for the printer databases.

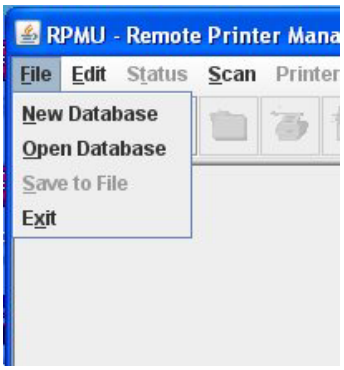


Figure 5. The File Menu

New Database Creates a new database file.

Open Database Opens an existing database.
Note: Only one database can be opened at a time. If a database is already open, you are asked to save changes to the open database before creating the new one.

Save To File Saves the current database file. The program prompts you to enter a name for the file.

Exit Ends the RPMU program.

The Edit Menu

The **Edit** menu allows you to manage the printer database contents: folders, printer devices, configuration files, or firmware download files.

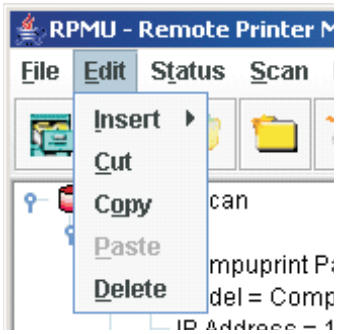
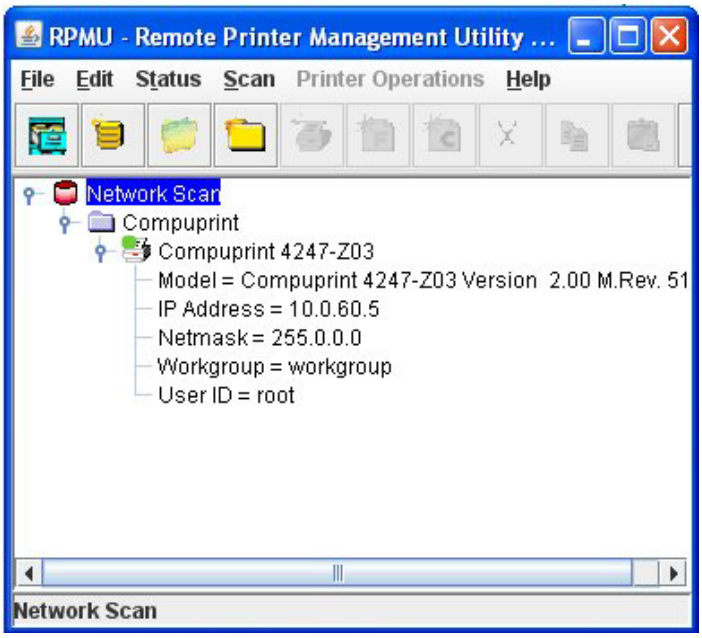


Figure 6. The Edit Menu

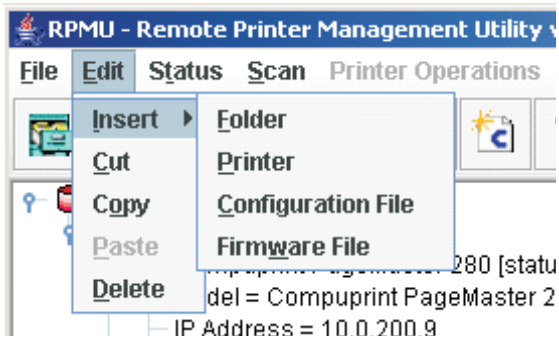
Insert Add a folder, a printer device, configuration file, or firmware download file in a previously selected folder. A corresponding icon is placed in the folder:

This example shows the database **Network Scan** containing the folder “Scan Folder” with some printer icons:



The **Insert** item offers these selections:

- Folder
- Printer
- Configuration File
- Firmware File

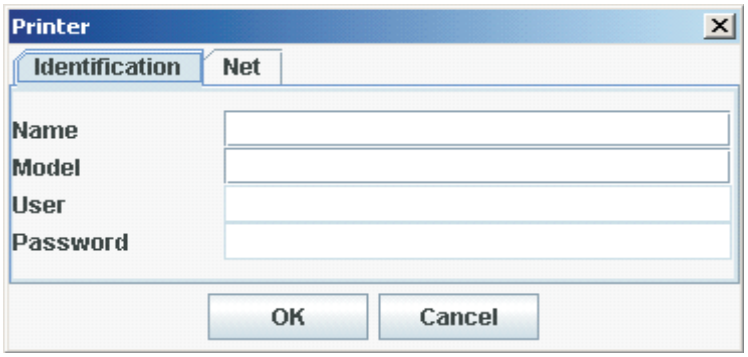


Folder

You are prompted for the name of the new folder. Enter the folder name and select **OK**.

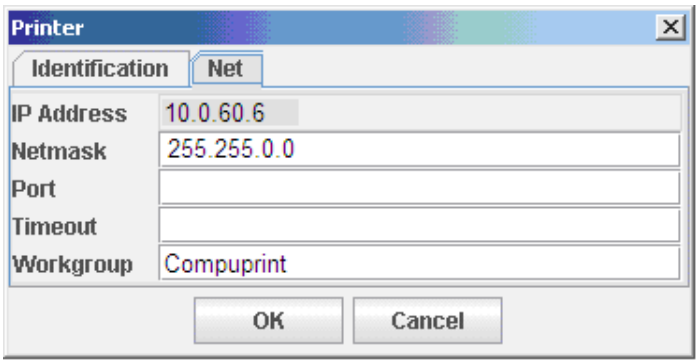
Printer

The **Printer** dialog displays to record printer identification values and network parameters. The data entry dialog is divided into two different parameter groups: **Identification** and **Net**.



Name	Enter the name for the printer.
Model	This is a read-only field. The printer model is inserted by the program as soon as it has discovered the printer identified by the IP address (in the **Net** parameter group).
User	Read only – name of printer's user
Password	Read only – the encrypted password of the user

The **Net** parameter has the following attributes:



IP Address Enter the printer's IP Address in this field.

Netmask Enter the Netmask that identifies the printer connection.

Port Enter the port number.

Timeout Enter the timeout value.

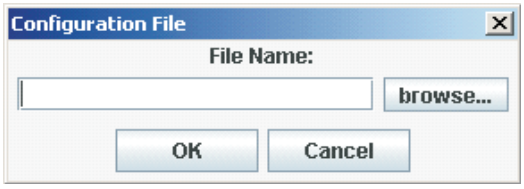
Workgroup Enter the printer's Workgroup in this field.

As soon as the new printer data are confirmed, the RPMU tries to contact the printer to update its current status.

Note: If the printer is not found within the time indicated as Timeout, the RPMU displays the printer in the database as “not ready”.

Configuration File

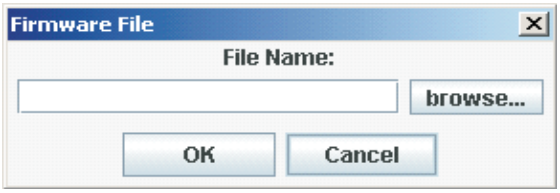
Selecting **Configuration File** displays the following dialog box. Enter the name of the configuration file, or look for it on your computer by selecting the **Browse** button.



Pressing **OK** allows the RPMU to insert the selected configuration file into the current folder. See “Inserting a Configuration File into a Folder” on page 17 and “Configuring the Printers in the Database” on page 19.

Firmware File

Selecting **Firmware File** displays the following dialog. Enter the name of the firmware file you want to download directly, or look for it on your computer by selecting the **Browse** button.



Selecting **OK** allows the RPMU to insert the selected firmware file into the current folder. See “Inserting a Firmware File into a Folder” on page 16 and “Updating the Printer's Firmware Version” on page 26.

Cut Selecting **Cut** removes the selected item (folder, printer, or file) from the database and copies it into the paste buffer.

Copy Selecting **Copy** copies the selected item into the paste buffer. The selected item remains unchanged.

Paste The item inserted in the paste buffer (with the **Cut** or **Copy** function) is put in the selected position in the database tree.

Delete The selected item is permanently removed from the database.

The Status Menu

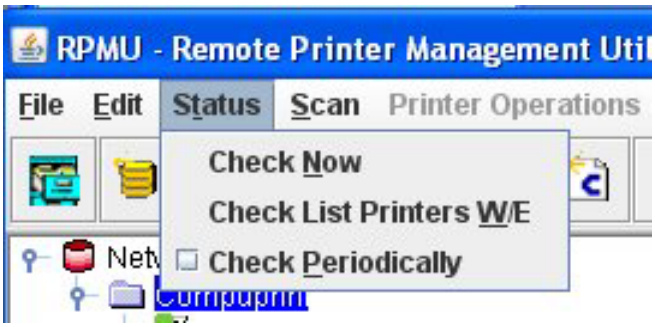


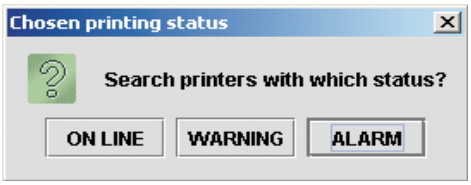
Figure 7. The Status Menu

Check Now

Selecting **Check Now** performs a check on all printers connected to the network and updates all the printer status.

Check List Printers W/E

Selecting **Check List Printers W/E** performs a check on all printers connected to the network and shows only the printers that are in **ONLINE** and in **WARNING** or **ALARM** status.



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Check Periodically

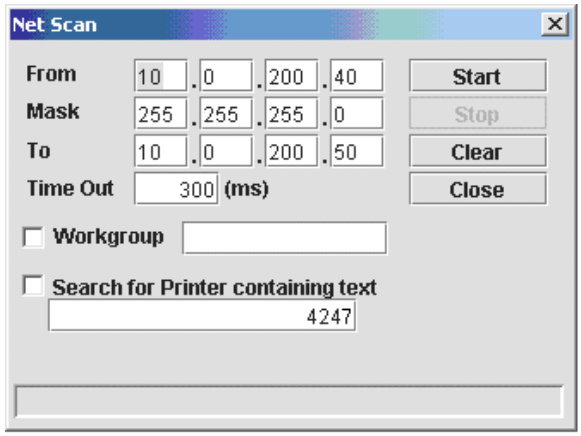
Check Periodically enables or disables status polling. When **Check Periodically** is selected the RPMU performs an automatic check every 10 seconds. See “Checking the Printer Status” on page 18.

The Scan Menu

Figure 8. The Scan Menu

Printers Net Scan(insert)

The RPMU searches for the connected printers within a specified IP-address range by sending a burst of directed SNMP requests to each IP address within the range. Any printer found in that range is inserted into the existing Database.



Printers Net Scan(new)

The RPMU searches for the connected printers within a specified IP-address range by sending a burst of directed SNMP requests to each IP address within the range. The current database is closed, and a new database is created.

The Printer Operations Menu

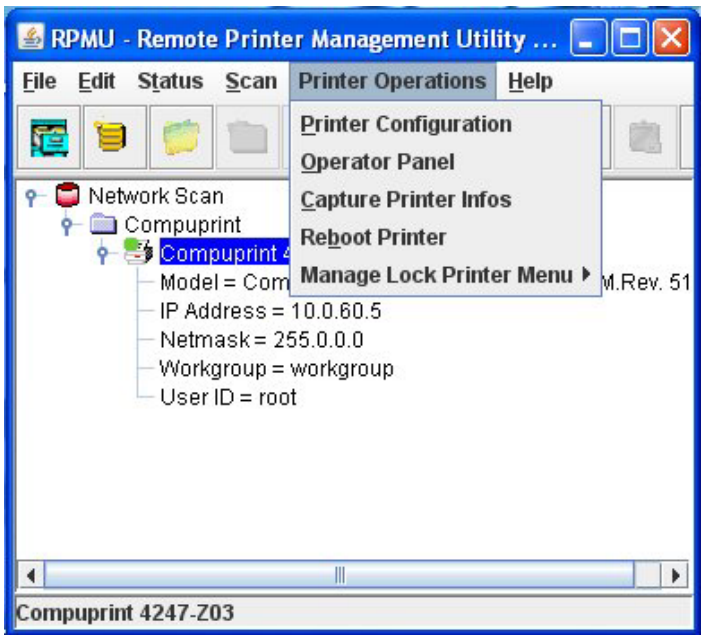


Figure 9. The Printer Operation Menu

Printer Configuration	Use **Printer Configuration** to retrieve and edit the configuration file of the printer you selected in the database
Operator Panel	Use **Operator Panel** to view the virtual operator panel of the printer you selected on the screen.
Capture Printer Infos	Use **Capture Printer Infos** to display the configuration values of the selected printer.
Reboot Printer	Use **Reboot Printer** to reboot the selected printer.
Manage Lock Printer Menu	Use **Manage Lock Printer Menu** to lock and unlock the printer menu.

The Tool Bar

Figure 10. The Tool Bar

The tool bar shows a series of icons that allow an easier access to the menu functions:

- Open a new database
- Create a new database
- Save database
- Add a new folder
- Add a new printer
- Add a new firmware file
- Add a new configuration file
- Cut an object
- Copy an object
- Paste an object
- Edit an object's field
- Delete an object
- Expand the information tree
- Collapse the information tree
- Send a firmware file to the devices
- Send a configuration file to the devices
- Edit a configuration file
- Remote Panel management
- Get the configuration from a device
- Printer net scan (for update)
- Printer net scan (new)

Setting up the Printer Database

The RPMU's main features are the collection, organization, and management of the printer database.

The database may be set up manually or with an automatic discovery feature. The discovery feature searches for connected devices and automatically adds them to the current database file.

Graphic Conventions Used in the RPMU

The following icons are used in the RPMU windows:

This symbol appears beside the folders and printer symbols. When selected, the object toggles between an expanded ( ) or collapsed ( ) view. The expanded view shows details for the object; the collapsed view hides the details.

The printer in the database is ready and working normally.

The printer in the database is ready and working, but a consumable is running out. The printer will probably need an operator's intervention soon.

The printer in the database is in an alarm or standby state - no more jobs will be printed. An operator's intervention is necessary.

The printer connection is lost. An operator intervention is necessary. The printer has been removed or the connection is interrupted.

Configuration File. The Configuration File may be added to a folder to indicate the current configuration of the printers in that folder.

Firmware File. The Firmware File may be added to a folder to indicate the current firmware version of the printers in that folder.

Automatic Device Discovery

This procedure is useful for setting up the printer database for the first time.

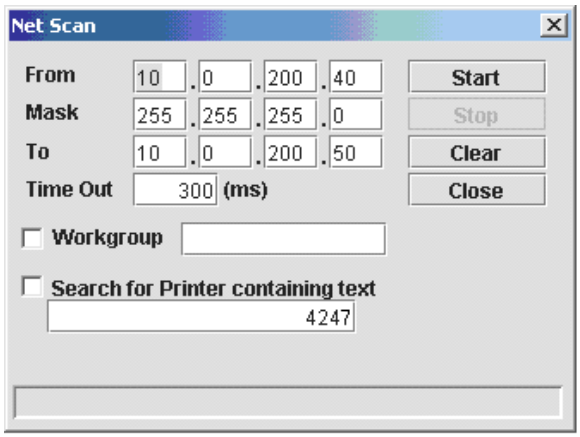
The RPMU searches for the connected printers within a specified IP-address range by sending a burst of directed SNMP requests to each IP address within the range.

During the device discovery procedure the RPMU maps serial matrix printers for complete management, getting the proprietary MIB objects supported. Third-party vendor devices are mapped for basic status reporting only.

How to Start the Automatic Device Discovery

Start the first-time automatic device discovery by selecting the icon (Printer net scan (new)) on the RPMU's tool bar.

After entering a folder name for the new scan, for example "4247–X03". The following dialog is displayed:



The **From** and **To** IP-addresses define the start and stop addresses of the range in which the connected printers will be checked. **Mask** defines the **Netmask** for the search procedure.

The value set for **Time Out** defines the time the program waits for a reply from a device connected to each IP-address. If no printer is detected, after the time has passed, the program goes to the next IP address within the range. The **Time Out** setting is useful when performing a device discovery procedure on large networks that normally take a long time. The **Time Out** setting ranges between 300 milliseconds (ms) and 100 seconds.

The value set for **Workgroup** in the text area defines the workgroup name of the printers to be searched. The value set for **Search for Printer containing text** defines the text to be searched in the printer's name.

Once the printers connected to the network have been discovered and identified with their IP-address, they can be grouped in a logical way so that the user can access them quickly and easily.

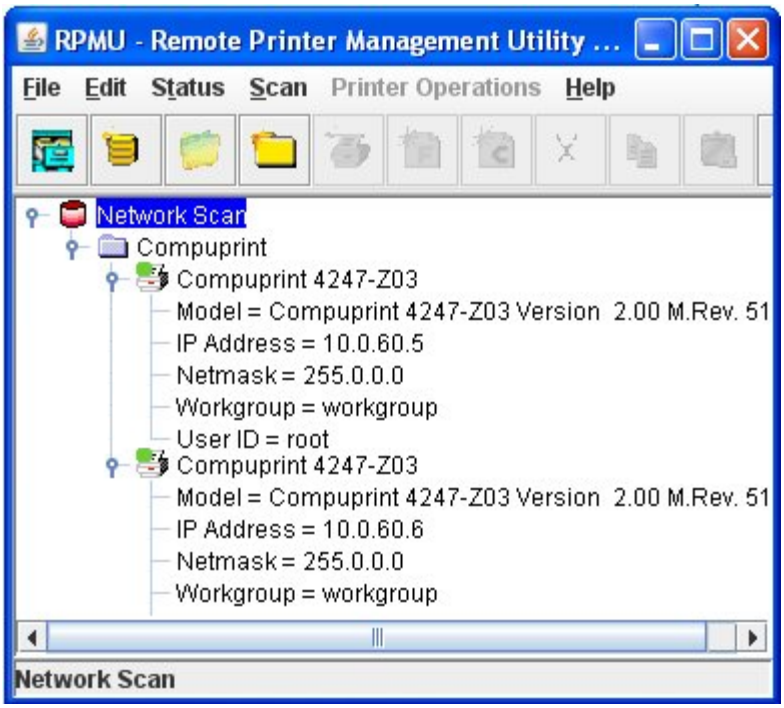


Figure 11. Logical Grouping of Printers in the Database

The logical groups can be defined hierarchically allowing for navigation through nested device groups. The discovered printers can then be placed into each group.

This structured database can be saved to disk and then retrieved.

The organization process of the devices is performed through the following functions:

Creating a New Database

Use this procedure for organizing your printers.

The RPMU allows you to create various printer databases and then organize the corresponding printers into folders and subfolders, reproducing the structure of single offices, departments, or the whole company.

1. To create a new database, select the icon (Create a new database) on the tool bar. The **Database Name** dialog is displayed.

2. Enter a database name.

Now you can structure and organize the database as follows:

Adding a New Folder

1. Select **Edit** ➙ **Insert** ➙ **Folder** or select the icon (Add a new folder) on the tool bar. The RPMU prompts you for the folder name.

2. Enter a name for the printer group you want to create and then select the **OK** button.

Note: The RPMU is able to manage nested folders. The printer database may be structured as needed.

Organizing the Folders

Reorganize the Printers Already Present in the Database

If you performed the automatic device discovery procedure described above, you will already have a list of printers connected to the network. In this case you have to reorganize these printers in the folder structure you created with the cut and paste procedure:

Select the printer to put in the new folder and then select the icon (Cut an object) (or select **Edit** ➙ **Cut**).

Select the folder in which you want to put the printer and then select the icon (Paste an object) (or select **Edit** ➙ **Paste**).

The printer and the corresponding information now appear in the folder.

Manually Inserting a Printer

To manually insert a printer at any time while organizing the database, as either the first printer or in addition to the existing printers in the database, proceed as follows:

1. Select the folder in which you want to insert the printer and then select the icon (Add a new printer) on the tool bar (or select **Edit** ➙ **Insert** ➙ **Printer**).

2. The RPMU displays the printer data dialog box, in which you must enter the printer's parameters. It is necessary to specify the printer name (**Identification** parameter group), the **IP Address**, and **Netmask** (**Net** parameter group).

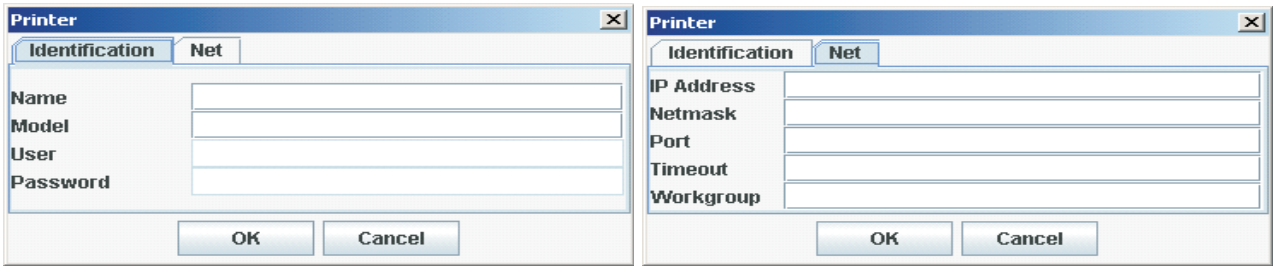


Figure 12. Printer Data Dialog Boxes

Note: For more information about how to fill in these dialog boxes, see “The Edit Menu” on page 5.

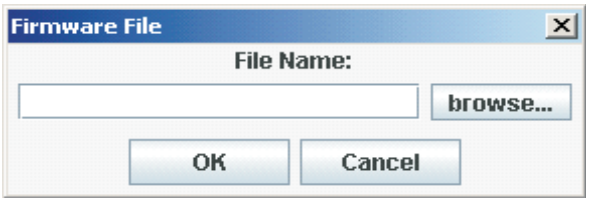
As soon as the new printer data are confirmed, the RPMU tries to contact the printer in order to update its current status.

Note: If the printer is not found, the RPMU displays the printer in the database as “not ready”.

Inserting a Firmware File into a Folder

A firmware file may be inserted into a folder to indicate the firmware version loaded on the printers contained in this folder.

1. Select the icon (Add a new firmware file) on the tool bar (or select **Edit** ➙ **Insert** ➙ **Firmware File**), the **Firmware File** dialog is displayed.



2. Select the **browse ...** button, select the firmware file you want to insert into the folder, then select **OK**.
3. The **Firmware File** is shown in the selected folder with its identifier graphic .

Note: No firmware download is performed when inserting the firmware file into the folder.

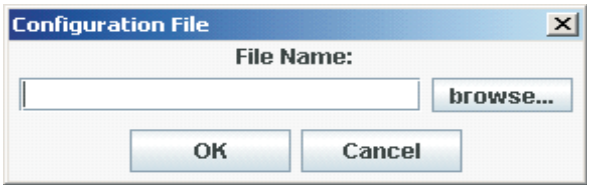
For information on how to download a new firmware version to the printers, see “Updating the Printer's Firmware Version” on page 26.

Note: More than one firmware file can be added to each folder.

Inserting a Configuration File into a Folder

A configuration file may be inserted into a folder to indicate the configuration set on the printers contained in this folder.

1. Press the icon (Add a new configuration file) on the tool bar (or select **Edit** ➡ **Insert** ➡ **Configuration File**), the **Configuration File** window appears.



2. Press the **browse ...** button, select the **Configuration File** you want to insert into the folder, and press **OK**.

3. The **Configuration File** is shown in the selected folder with its identifier graphics .

Note: No configuration updating is performed when inserting the configuration file into the folder.

For information on how to update the configuration of the printers, see “Configuring the Printers in the Database” on page 19.

Note: More than one configuration can be added to each folder.

Changing the Database Structure

To further organize the folders, printers, firmware, and configuration files in the database, you can use the following tool bar icons:

Cut an object

Copy an object

Paste an object

Edit an object's field

Delete an object

Optimizing the Database Display

Use the following icons to expand or hide the folders, subfolders, and printer information in the database window.

Expand the information tree

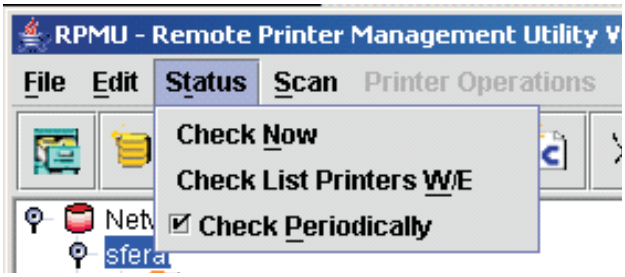
Reduce the information tree

You can select the symbol to toggle between the expanded and reduced view of the information tree.

Printer Database Management

Checking the Printer Status

Use RPMU program to check the status of the printers connected to the network. The **Status Function** in the RPMU menu offers three selections:



Check Now RPMU checks on all the peripherals in the database and updates their statuses.

Check List Printers W/E RPMU checks on all printers connected to the network and shows only the printers that are in **ON LINE**, **WARNING**, or **ALARM** state.

Check Periodically Enables or disables status polling. When the **Check Periodically** is selected, the RPMU performs an automatic check approximately every 10 seconds.

After the check the printers in the database are shown with the corresponding status indication:

The printer in the database is ready and working normally.

The printer in the database is ready and working, but a consumable, such as paper, is running out. The printer will need an operator's intervention soon.

The printer in the database is in alarm or standby - no more jobs will be printed. An operator's intervention is necessary.

The printer in the database is not connected. The printer has been removed or the network connection is interrupted. An operator's intervention is necessary.

Configuring the Printers in the Database

With the RPMU you can read a printer's configuration, edit it, store it to disk, and download the updated configuration to the printer.

The best way to proceed is to read the existing configuration from the printer and to change it as necessary.

Retrieving a Configuration from a Printer

Note: This feature is only available for our Serial Matrix printers.

1. Choose the printer configuration you want to upload by either:

   - Opening the saved configuration file previously uploaded by selecting the icon (Edit a configuration file icon) on the tool bar or with the “Printer Configuration” in the “Printer Operations” menu.

   or

   - Upload the configuration file with the current settings for the printer by pressing the icon (Get the configuration from a device) on the tool bar or by way of the **Capture Printer Infos** in the **Printer Operation** menu.

The RPMU opens the **Configuration Editor** showing the configuration tree for editing.

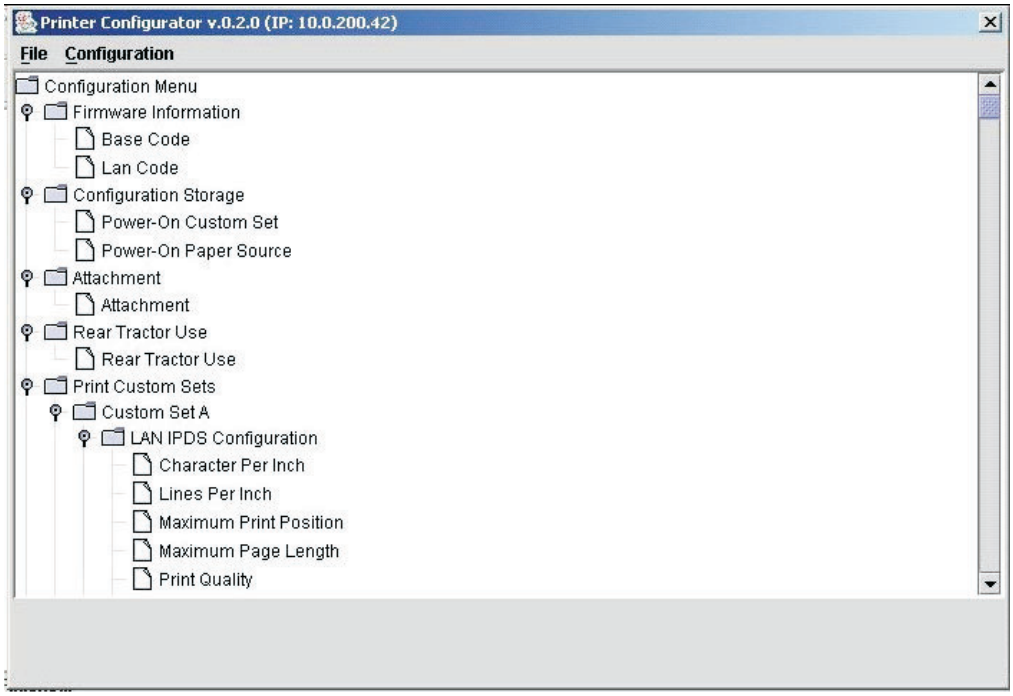


Figure 13. Printer Configuration Window

For each parameter, you can see the range of possible choices and the default setting by clicking on the parameter in the tree. For example, Figure 14 shows the Character per Inch parameter.

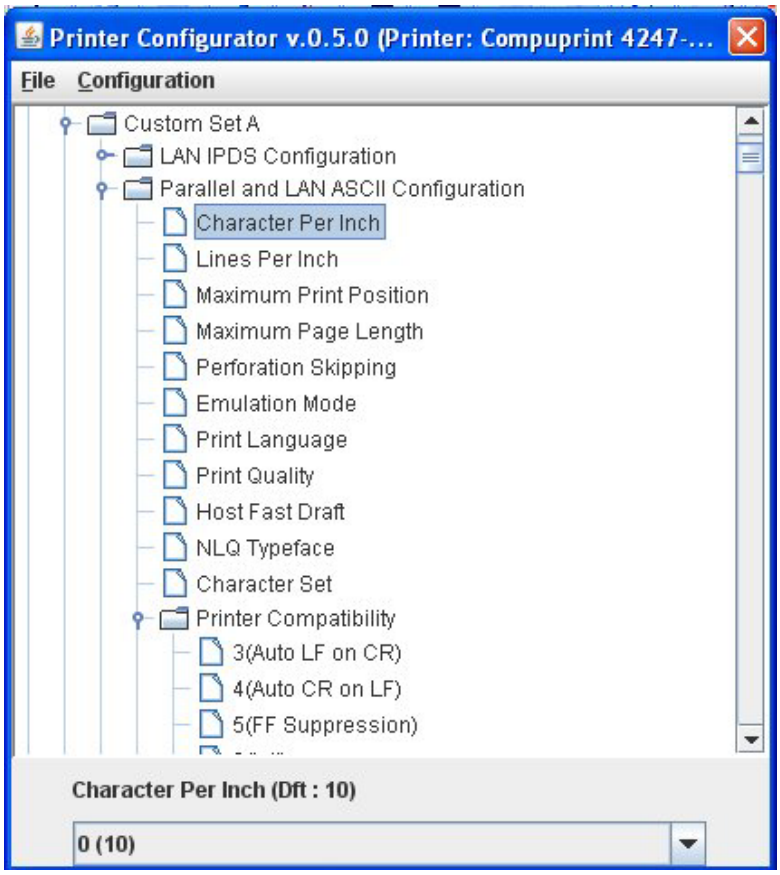


Figure 14. Character per Inch parameter

Editing a Printer Configuration

For each parameter in the printer configuration tree you can select the desired value.

1. Select the configuration parameter you want to set. The Printer Configuration Manager is displayed. The lower part of the window displays the default value and the currently set value of the parameter.

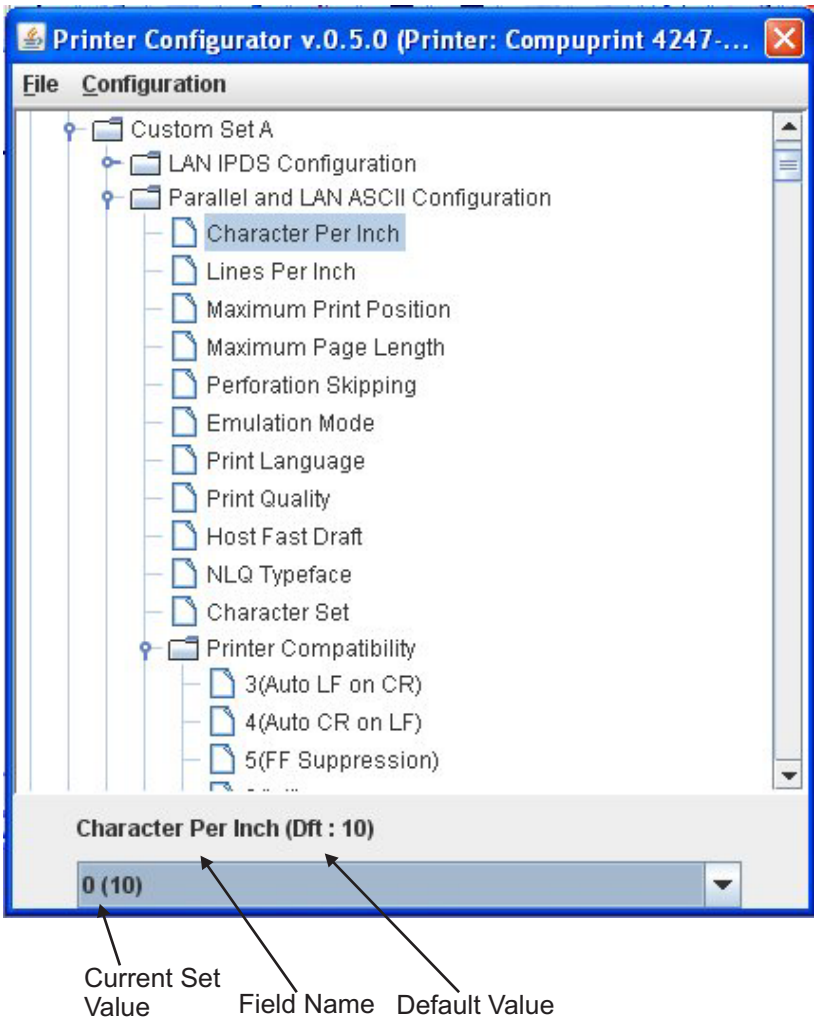


Figure 15. Printer Configuration Manager

2. Select the symbol on the right side of the current value. The pull-down list of the possible values is shown for the selection.
3. Click on the value shown in the current value field. The pull-down menu closes and the new value is set.

Set all the parameters in the same way.

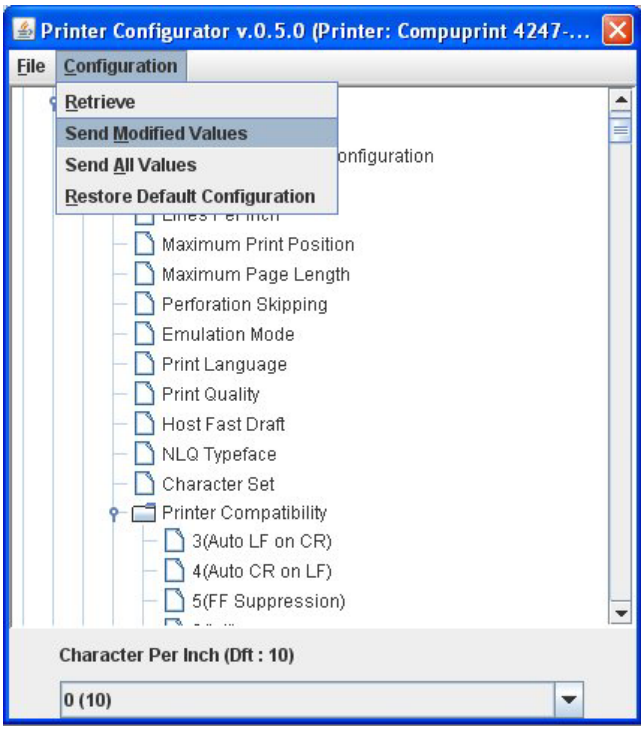
Note: The values set are only stored in your PC's RAM; no value has been set on the printers in the database.

You may now send the new settings to the printer and/or save the configuration file with the new settings on the hard disk of your PC.

Sending the Configuration to the Printers

Once all the parameters in the configuration tree have been set the new configuration must be sent to the printers.

1. In the **Printer Configurator** menu, select **Configuration**. You have two download possibilities:



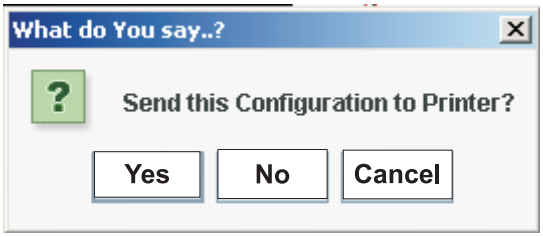
   Selecting:

   a. **Send Modified Values** Only the updated values are sent to the selected printers. This procedure is fastest.

   b. **Send All Values** The whole set of configuration parameters is sent to the printers. This procedure assures that all configured printers have identical settings.

Restore Default Configuration Restore the default Configuration into the working configuration file (not sent to printer).

2. Selecting either **Send Modified Values** or **Send All Values** in the **Printer Configurator** menu, the printer asks to confirm the selection.



Yes	Begins downloading the updated configuration (see step 3).
No	The configuration is not downloaded and the RPMU displays again the Main Window.
Cancel	The configuration is not downloaded and the Printer Setup tree is displayed for further changes.

3. Selecting **Yes** sends the updated configuration to the printer.

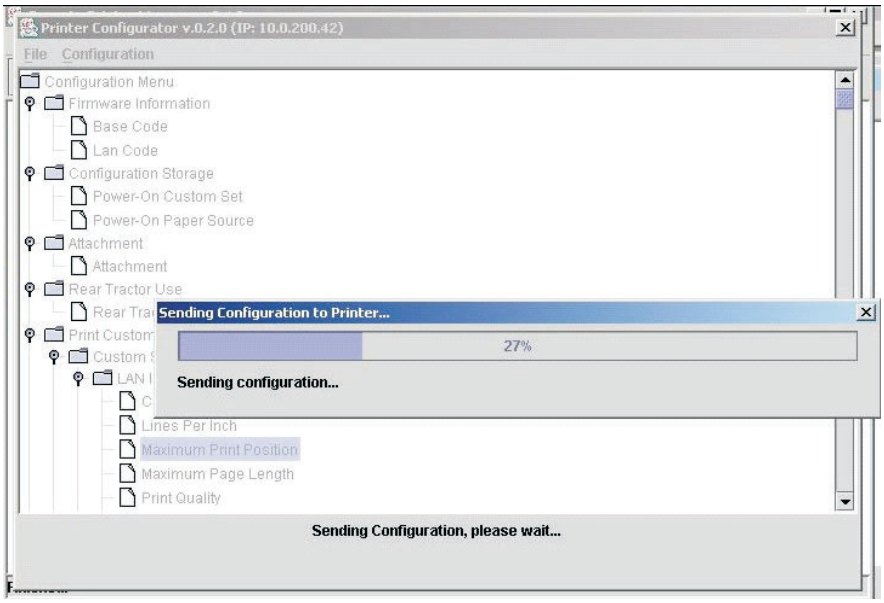


Figure 16. Sending the Configuration to the Printer

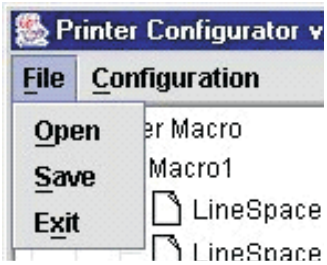
The program shows the progression bar during the download. At the end of the download procedure the printer is restarted with the new settings.

Saving the Configuration File to Disk

Once all the parameters in the configuration tree have been set, the configuration may be saved to disk.

This allows you to have different configuration files for updating your printers.

1. After editing the configuration tree, select **File** in the **Printer Configurator** menu.

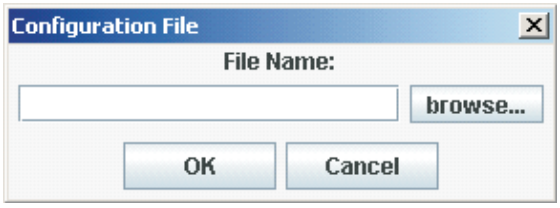


2. Select **Save**. The RPMU prompts you for a file name and folder.
3. Enter a name for the configuration file and Select **OK**.
4. The configuration file is saved to disk. You may load it for editing and/or updating a printer with these settings.

Updating a Printer or a Group of Printers Using an Existing Configuration File

The configuration files on your computer may be used to update the printers in the network. For example, when new printers are installed and should be configured as the other printers in the same group or for reconfiguring all printers of a group. Proceed as follows:

1. In the **Main Window** of the printer database position the cursor on the folder containing the printers to configure, then select the icon (Send a configuration file to the devices). The program shows the **Configuration File** selection window.



2. Enter the file name, or select the **browse...** button to select a configuration file.

The RPMU shows the list of the devices that are compatible with the selected configuration file.

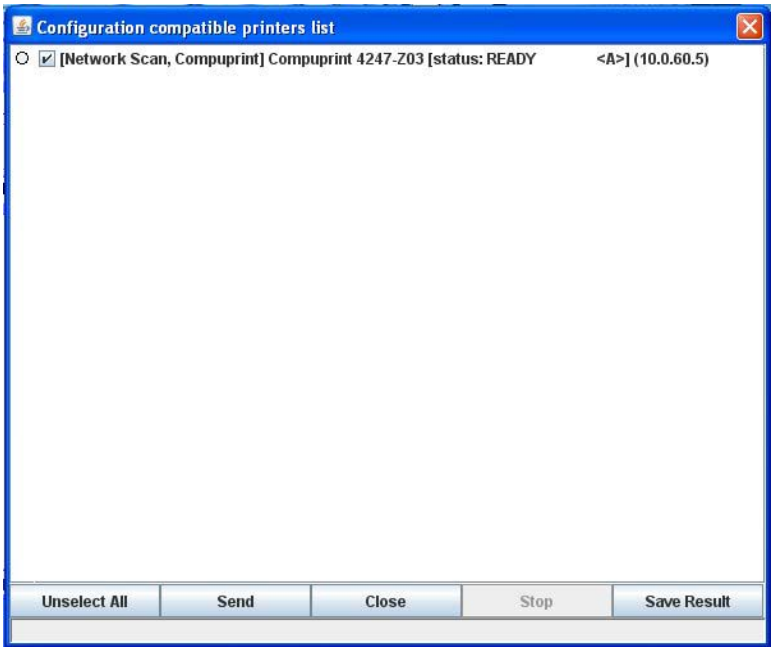


Figure 17. List of Compatible Devices

In this dialog, you can select or deselect the printers that you want to configure by selecting the check field (✔) beside the printer or selecting the first button at the bottom of the screen:

Unselect All / Select All This button selects or unselects all of the printers in the list.

Save Result This button saves the list of shown compatible devices and all their information in the selected .TXT file.

Once the printers are selected, select the **Send** button. The Configuration File begins downloading.

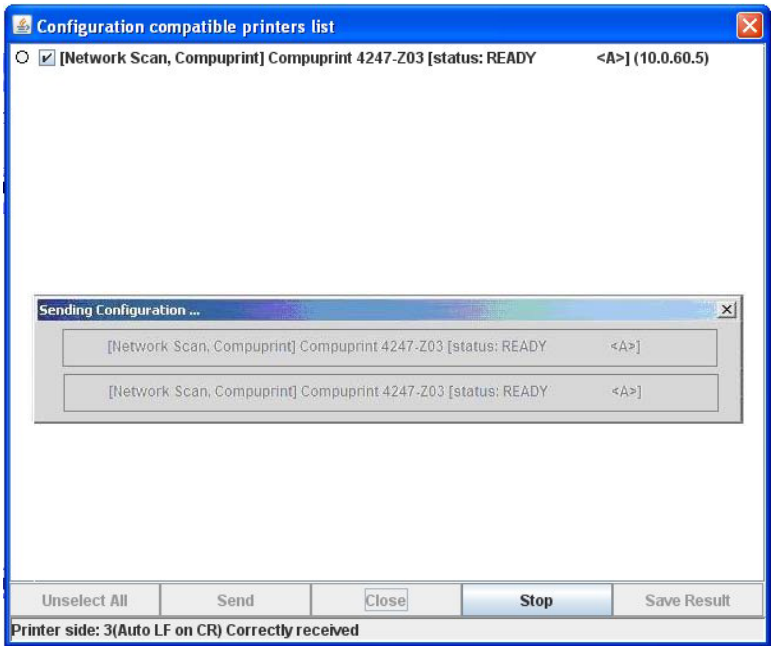


Figure 18. Downloading the Configuration File

- The first line on the screen indicates the printer that is being configured.
- The second line indicates the parameter that is being updated.

Once the printers have been configured the RPMU shows the result of the download:

- If the download was successful, the printer is checked with a green check sign.

- If an error occurred during the download, the printer is checked with a red cross sign.

Note: When the configuration parameters have been sent to the printer, it is re-initialized to set the new printer configuration.

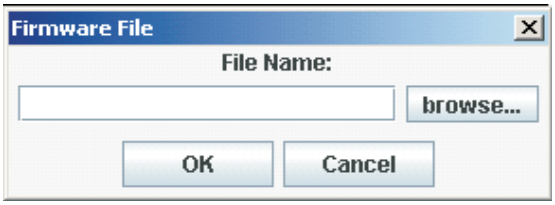
After a group of printers has been updated, insert the configuration file used for the update into the folder containing the updated printers. See “Inserting a Configuration File into a Folder” on page 17.

Updating the Printer's Firmware Version

The firmware downloading utility allows you to upgrade either the base board or the LAN card flash content.

A single download operation can be done on a list of peripherals belonging to the same folder in the Printer Database.

1. You can only download firmware to printers that are "online" ready. Check the online status of all printers in the main window and use the Virtual Operator Panel feature of this program to bring the firmware update targeted printers online/ready as needed.
2. In the RPMU **Main Window** select the folder containing the printers for which you want to update the firmware, and select the icon (Send a firmware file to the devices) on the tool bar.
3. The program displays the **Firmware File** selection window.



4. Enter the file name or select the **browse...** button to select the firmware file.

The RPMU shows the list of printers that are compatible with the selected firmware file.

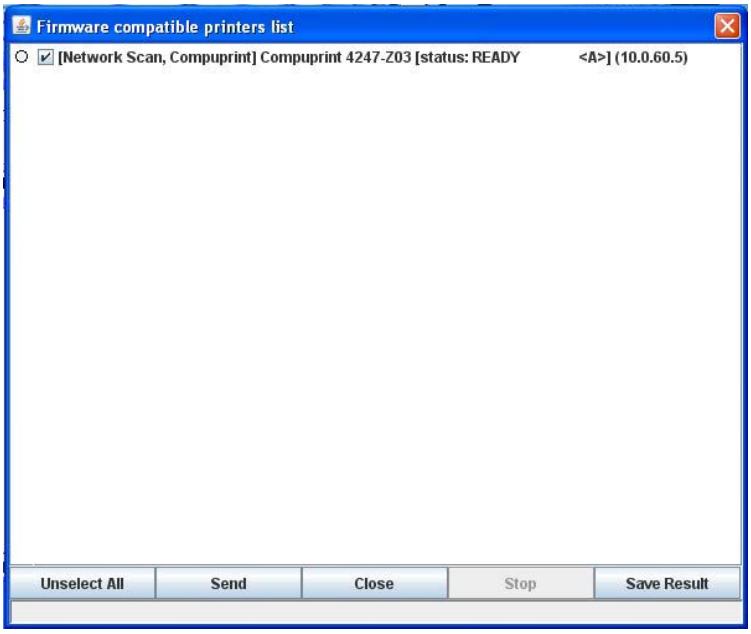


Figure 19. List of Compatible Printers

In this dialog, you can select or deselect the printers to which you want to download the firmware file by selecting the checked field (✔) beside the printer or pressing on the first lower button:

Unselect All / Select All This button selects or unselects all of the printers in the list.

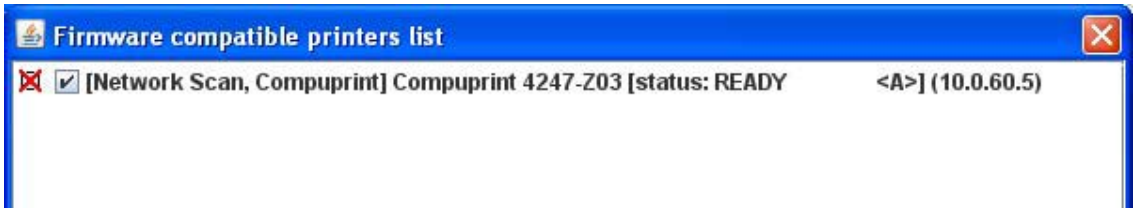
Save Result This button saves the list of shown compatible devices and all their information in the selected .TXT file.

Press the Send button to start downloading the Firmware Files to the selected printers.

When the printers have been updated the RPMU shows the result of the download:

- If the download was successful, the printer is checked with a green check sign.

- If an error occurred during the download, the printer is checked with a red cross sign.



Note: After firmware downloading the printer is restarted with the new code release.

After a group of printers has been updated, insert the configuration file used for the update into the folder containing the updated printers. See “Inserting a Firmware File into a Folder” on page 16.

Configuring a Printer With the Virtual Operator Panel

For our Serial Matrix printers, you can call up the corresponding virtual operator panel with all the keys, LEDs, and the display.

You can then perform all printer operator panel functions on your computer in the same way as if you were in front of the printer. Click on the operator panel keys with your mouse.

The following figures shows the virtual operator panel of the printer.

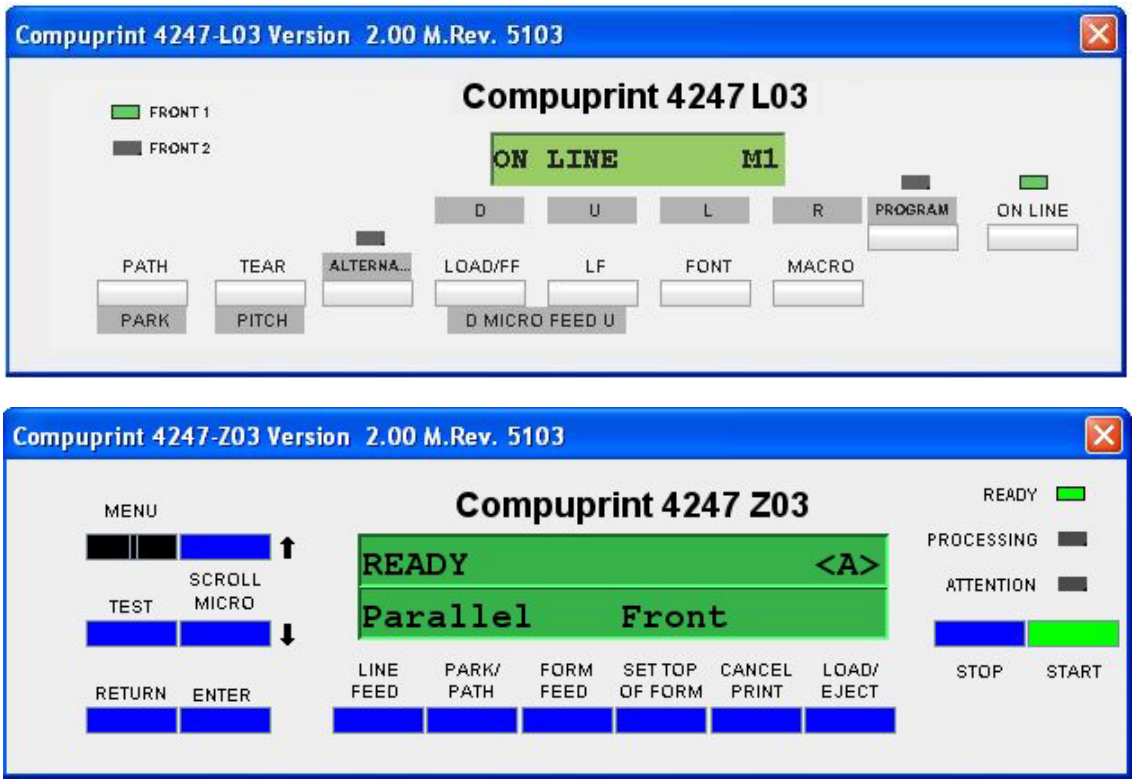


Figure 20. The Virtual Operator Panel of Compuprint 4247L03 and 4247Z03 (and 4247X03)

To call up the virtual operator panel:
1. Select the printer for which you want to see the virtual operator panel.

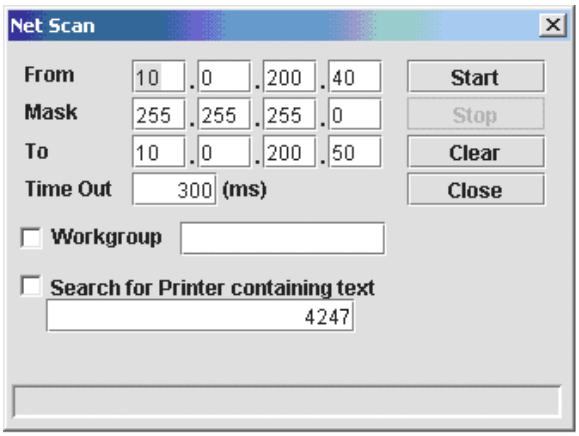
a. Select the icon (Remote Panel management) on the tool bar or the Operator Panel in the Printer Operation menu.
2. The corresponding operator panel appears on the screen.

Note: For more details on the operator panel functions, please see the user manual of the corresponding printer.

Updating the Printer's List in the Database

When printers are connected to or removed from the network, you can update the structure by performing an update net scan. During the device discovery procedure the RPMU maps printers for complete management getting the proprietary MIB objects supported. Third-party vendor devices are mapped for basic status reporting.

The update automatic device discovery is started by selecting the icon (Printer net scan (for update)) on the Remote Printer Manager's tool bar. The following dialog is displayed:



The **From** and **To** IP-addresses define the start and stop addresses of the range in which the connected printers are checked. **Mask** defines the Netmask for the search procedure. The value set for **Time Out** defines the time the program waits for a reply of a device connected to each IP-address. After the time has passed, if no printer is detected, the program goes to the next IP address within the range. Setting **Time Out** is useful when performing a device discovery procedure on large networks.

The value set for **Workgroup** in the textbox defines the workgroup name of printers to be searched. The value set for **Search for Printer containing text** defines the text to be searched into the printer name.

Once the printers connected to the network have been discovered and identified with their IP-address, they may be grouped in a logical way so that the user can access them quickly and easily.

Note: The **Workgroup** name can be obtained from the **Workgroup** field for a particular printer description in the main window.

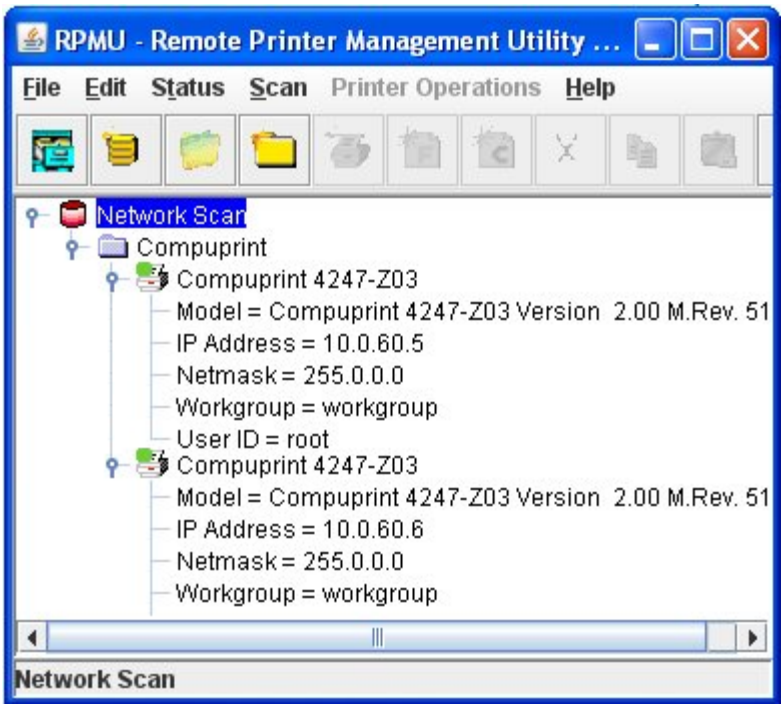


Figure 21. Logical Grouping of Printers in the Database

Note: Discoveries are started by selecting the corresponding icon on the RPMU tool bar. No means for automatically detecting new devices are provided.

The found printers may be organized as previously described in this manual.

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